1. Find the volume of the solid generated by revolving the region bounded by  $y=x^4$ , y=0 and x=1 about the x-axis.

**2.** Find the area of the surface of revolution generated by revolving the arc  $y = x^2 - x + 1$  from x = 0 to x = 1 about the x-axis.

**3.** Find the area of the surface of revolution generated by revolving the arc  $y = x^2 - x + 1$  from x = 0 to x = 1 about the y-axis.

## Math 182 Honors Quiz 12 Version A

4. Determine whether the following infinite series converge and explain your answer.

$$(i) \sum_{n=1}^{\infty} \frac{1}{n+13}$$

(ii) 
$$\sum_{n=1}^{\infty} \frac{\log(n+13)}{n^2}$$

(iii) 
$$\sum_{n=1}^{\infty} \frac{2^n}{n^n}$$